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Editorial

Inadequate investment in school health education: A missed opportunity

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In 2012, a 30-year-old individual in India had a 26% chance of dying from one of the four main noncommunicable diseases, including cardiovascular disease, before his or her 70th birthday, a two and half times higher chance of premature death due to noncommunicable diseases, when compared to some high-income countries.[1] India has made impressive advances in improving life expectancy and combating communicable diseases. However, it is still home to about one-fifth of the world's burden of diseases and carries a high burden of maternal, newborn and child deaths, and noncommunicable disorders.[2] A recent study estimates the total economic loss due to noncommunicable and mental health diseases in India, between 2012 and 2030, to be $4.58 trillion—about two and a half times India's gross domestic product (GDP), with cardiovascular diseases accounting for almost half of the losses.[3]

When it comes to noncommunicable diseases, today's risk factors are diseases of tomorrow. India records a high prevalence of behavioral risk factors of noncommunicable diseases. According to the 2014 WHOs Global Status Report on noncommunicable diseases,[1] in adult males, the crude adjusted estimate for the prevalence of current tobacco smoking is 24.1% and per capita consumption of pure alcohol is 8 L. Crude adjusted estimates for the prevalence of insufficient physical activity, according to WHO criteria, are 9.2% and 15.1% among adult males and females, respectively and 69.6% and 71.6% among boys and girls, respectively.[1] A school-based study in 2011 reported that the prevalence of overweight and obesity in 8- and 18-year-old children, respectively, were, 18.5% and 5.3% by World Health Organization cutoffs.[4] This unfavorable risk factor profile forecasts a gloomy future for noncommunicable disease trends.

However, as one of the fastest growing economies, India can do a great deal to change the course of noncommunicable diseases. To bring about the change, it requires (i) a major policy shift, from the current focus on disease to prevention and health promotion and (ii) a strengthening of the primary healthcare approach and universal health coverage. Government policies need to prioritize health promotion and prevention strategies, targeting risk factors as well as determinants of health in pregnant women, children, and adults of all ages. Many determinants and risk factors of disease lie outside the health sector. They include lack of access to water, sanitation, education, housing, employment, air pollution, unhealthy diet, tobacco use, harmful use of alcohol, and physical inactivity. Only a whole-of-government and multisectoral response can address them effectively. Mobilizing a response to protect health is quite challenging for all countries. A whole-of-government response means that various ministries collaborate to promote healthy behaviors. It also means that an enabling environment conducive to healthy behavior is created through health promoting public policies. These healthy public policies need to cut across environment, education, urban design, trade, finance, health, and other relevant ministries. To implement such policies, ministries of health need to engage public, private, health professional, and the nongovernmental sectors. When supported by healthy public policies and multiple actors, health promotion activities can be effectively implemented in many settings: in schools, after-school care services, homes, worksites, and community services.

There is growing evidence that negative health behaviors initiated in childhood may persist through adulthood, leading to risk factors of disease, particularly noncommunicable diseases, such as cardiovascular disease. School and community programs that improve knowledge, attitude, and habits related to regular physical activity, healthy diet, and avoidance of tobacco and alcohol are recommended for reducing the burden of noncommunicable diseases.[1] In this issue, Ray et al. reports on the findings of a survey on cardiovascular health awareness among school-aged children in a rural district of West Midnapore in India. The objective was to assess the level of health awareness about cardiovascular diseases in

adolescent school-aged children, with the goal of establishing school-based health education, early detection of risk factors for cardiovascular diseases, and development of heart-healthy lifestyle practices. The study consisted of a pre-evaluation of cardiovascular health awareness, a short presentation on cardiovascular diseases, and a post-evaluation of the degree of improvement in cardiovascular health knowledge. Ray and others found that cardiovascular health awareness was far from optimal among adolescent school children. Many of the students were not aware of the multifactorial nature of cardiovascular diseases. They had limited awareness of individual risk factors of cardiovascular diseases. There was a modest effect on school children's awareness of cardiovascular diseases with the use of a single, simple, and inexpensive educational intervention.

Ray et al. conclude that a school-based educational program may help improve awareness and reduce disease burden in rural communities in India and that the results of this study may be useful in formulating a nationwide school health program to deal with the emerging epidemic of cardiovascular disease. A nationwide school health program should be a key component of a comprehensive national health promotion program. When integrated across risk factors and diseases, school health programs can contribute not only to prevention and control of noncommunicable diseases but also to reduce the burden of communicable diseases and maternal and child health disorders. An integrated health education curriculum should form the basis of such programs and cover physical, mental, emotional, and social dimensions of health. School health education needs to be supported by physical education that promotes physical fitness, learning experiences in nutrition, and learning modules to pass on social, personal, and motor skills. A supportive school environment is vital, so that knowledge imparted from health education has a good chance of translating into healthy behaviors. For example, as part of a school health program, healthy school meals and healthy food choices need to be available for children and unhealthy food, such as sweetened beverages and energy-dense junk food, should be banned in school cafeterias.

Admittedly, to curtail the fast growing epidemic of noncommunicable diseases, policy environment to promote the health of children needs to go way beyond health education and create conducive environments within and outside schools, to nurture positive behavior change. These include implementing regulations to prohibit tobacco and alcohol promotion and sales to children, reducing taxes and prices of fruits and vegetables, strengthening food labeling practices, creation of safe playgrounds, parks, and walking and bicycle tracks, restriction on advertisement of commercial foods on television at prime time and during children's programs, and ban on sponsorship of youth festivals by tobacco, alcohol, soft drink, and junk food companies.

Particular attention needs to be paid to regulate marketing of foods and nonalcoholic beverages with a high content of fat, sugar, or salt to children. Across the world, commercial entities use a multifaceted mix of powerful marketing communications and techniques to build relationships with children and adolescents. They include advertising, sponsorship, sales promotion using celebrities, television, web sites, packaging, point-of-purchase displays, e-mails, and text messages. School health education programs should make children aware of these pervasive tactics aimed at promoting health damaging behaviors. There is already a set of WHO recommendations to guide efforts of countries in strengthening policies to control food marketing communications to children.[5] An implementation framework is also available so that policy-makers can ensure effective implementation of these recommendations.

School health education represents an opportunity for protecting the health of children and adolescents, particularly in low- and middle-income countries, where rapid changes are occurring in behaviors, which are the root causes of noncommunicable diseases. The work of Ray et al. highlights the need for a nationwide school health program in India. Given that India has over 200 million children of school-going age, the use of modern communication technologies to widen the reach and building capacity for national scale-up should be key considerations in the design of such a program. Research needs to underpin the development and implementation of the program, in order to examine the feasibility, affordability, long-term sustainability, and impact. Gains will not be immediate but investment in safeguarding the health of children will bring rich physical, social, and economic dividends in the longterm. Indeed, goal 3 of the sustainable development goals, recently adopted by Heads of State and Government, commits to *ensure healthy lives and promote well-being for all at all ages by 2030*.[6] India has the means to be a pathfinder in attaining this goal including through the establishment of a national school health program.

Conflicts of interest

The author has none to declare.

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Shanthi Mendis
Geneva, Switzerland
E-mail address: Prof.shanthi.mendis@gmail.com

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